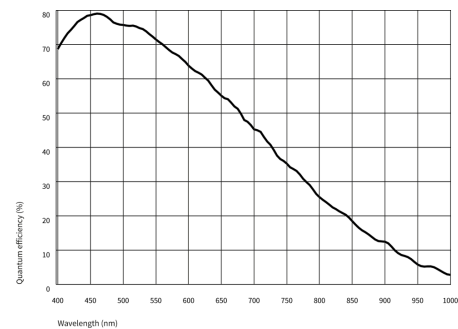


**In series**  
The model is in series and available for the long term.



Specification

|                                         |                                           |
|-----------------------------------------|-------------------------------------------|
| Sensor                                  |                                           |
| Sensor type                             | CMOS Mono                                 |
| Shutter                                 | Global Shutter                            |
| Sensor characteristic                   | Linear                                    |
| Pixel Class                             | 5 MP                                      |
| Resolution                              | 5.10 Mpix                                 |
| Resolution (h x v)                      | 2472 x 2064 Pixel                         |
| Aspect ratio                            | 5:4                                       |
| ADC                                     | 12 bit                                    |
| Color depth (camera)                    | 12 bit                                    |
| Optical sensor class                    | 1/1.8"                                    |
| Optical Size                            | 6.773 mm x 5.655 mm                       |
| Optical sensor diagonal                 | 8.82 mm 1/1.8"                            |
| Pixel size                              | 2.74 µm                                   |
| CRA (Chief Ray Angle)                   | 0 °                                       |
| Manufacturer                            | Sony                                      |
| Sensor Model                            | IMX547-AAMJ-C                             |
| Gain (master/RGB)                       | 16x/-                                     |
| AOI horizontal                          | same frame rate                           |
| AOI vertical                            | increased frame rate                      |
| AOI image width / step width            | 256 / 2                                   |
| AOI image height / step width           | 1 / 1                                     |
| AOI position grid (horizontal/vertical) | 2 / 1                                     |
| Binning horizontal                      | increased frame rate                      |
| Binning vertical                        | increased frame rate                      |
| Binning method                          | Horizontal: addition / Vertical: addition |
| Binning factor                          | 2x2                                       |
| Decimation (subsampling) horizontal     | increased frame rate                      |
| Decimation (subsampling) vertical       | increased frame rate                      |
| Decimation (subsampling) method         | M/C automatic                             |
| Decimation (subsampling) factor         | 2x2                                       |



Model

|                                    |                     |
|------------------------------------|---------------------|
| Frame rate freerun mode            | 75 fps              |
| Frame rate trigger (continuous)    | 75 fps              |
| Frame rate trigger (maximum)       | 75 fps              |
| Exposure time (minimum - maximum)  | 0.0085 ms - 2000 ms |
| Long exposure (maximum)            | 120000 ms           |
| Line rate freerun mode (line scan) | 1118 1/s            |
| Line rate trigger mode (line scan) | 1126 1/s            |
| Lines per frame (line scan)        | 8000                |
| Power consumption                  | 2 W - 3.9 W         |
| Image memory                       | 128 MB              |

HDR

|      |           |
|------|-----------|
| Mode | Sequencer |
|------|-----------|

Ambient conditions

The temperature values given below refer to the outer device temperature of the camera housing.

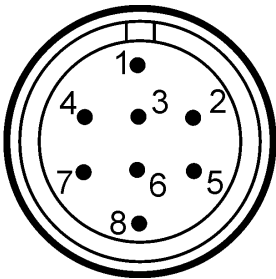
|                                             |                                 |
|---------------------------------------------|---------------------------------|
| Allowed device temperature during operation | 0 °C - 55 °C / 32 °F - 131 °F   |
| Allowed ambient temperature during storage  | -20 °C - 60 °C / -4 °F - 140 °F |
| Humidity (relative, non-condensing)         | 20 % - 80 %                     |

Connectors

|                     |                                           |
|---------------------|-------------------------------------------|
| Interface connector | USB 3.0 micro-B, screwable                |
| I/O connector       | 8-pin Hirose connector (HR25-7TR-8PA(73)) |
| Power supply        | USB cable                                 |

Pin assignment I/O connector

|   |                                             |
|---|---------------------------------------------|
| 1 | Ground (GND)                                |
| 2 | Flash output with optocoupler (-) - Line 1  |
| 3 | General Purpose I/O (GPIO) 1 - Line 2       |
| 4 | Trigger input with optocoupler (-) - Line 0 |
| 5 | Flash output with optocoupler (+) - Line 1  |
| 6 | General Purpose I/O (GPIO) 2                |
| 7 | Trigger input with optocoupler (+) - Line 0 |
| 8 | Output supply voltage, 5 V (100 mA)         |



Design

|                  |                             |
|------------------|-----------------------------|
| Lens Mount       | C-Mount                     |
| IP code          | IP30                        |
| Dimensions H/W/L | 29.0 mm x 29.0 mm x 29.0 mm |
| Mass             | 50 g                        |
| Housing material | Magnesium / stainless steel |

Features

List of on-camera image pre-processing features.

All features of the table are available via our IDS peak software for image pre-processing on the host computer (sensor model dependent).

## U3-31F0CP-M-GL Rev.2.2 (1009065)

|                           |                                |                                                 |
|---------------------------|--------------------------------|-------------------------------------------------|
| Image Acquisition         | Freerun                        | ✓                                               |
|                           | Software trigger               | ✓                                               |
|                           | Hardware trigger               | ✓                                               |
|                           | Trigger controlled exposure    | ✓                                               |
|                           | Denoiser                       | ✓                                               |
|                           | Long exposure                  | ✓                                               |
|                           | Line scan                      | ✓                                               |
| Flashing                  | Flashing                       | ✓                                               |
|                           | PWM flashing                   | ✓                                               |
| Image Adjustments         | Auto exposure                  | ✓                                               |
|                           | Auto gain                      | ✓                                               |
|                           | Auto whitebalance              | -                                               |
|                           | Color correction               | -                                               |
|                           | Gamma                          | ✓                                               |
|                           | LUT                            | ✓                                               |
|                           | Mirror/flip                    | X/Y                                             |
| On-board Image Processing | Pixel formats                  | Mono8<br>Mono10<br>Mono10p<br>Mono12<br>Mono12p |
|                           | Region of interest             | ✓                                               |
|                           | Decimation (FPGA)              | ✓                                               |
|                           | Decimation (Sensor)            | 2x2                                             |
|                           | Binning (FPGA)                 | ✓                                               |
|                           | Binning (Sensor)               | 2x2<br>Increases frame rate.                    |
|                           |                                |                                                 |
| Others                    | Chunks                         | ✓                                               |
|                           | Sequencer                      | ✓                                               |
|                           | Events                         | ✓                                               |
|                           | Firmware update                | ✓                                               |
|                           | 1st supported firmware version | 3.6                                             |